

19980610.ba v02\_n087.bam.980610

>From ???@??? Thu Jun 11 03:57:18 1998  
Message-Id: <199806102327.SAA03205@sco.theporch.com>  
Date: Wed, 10 Jun 1998 18:27:10 CDT  
Subject: BOATANCHORS digest 2087

BOATANCHORS Digest 2087

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- 1) Re: HQ-129X  
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by Pentti.Haka@Mikrolog.Fi (Pentti Haka)
- 4) WTB: Drake C-line  
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- 7) National web page??  
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by Ed Sieb <esieb@gmsiworld.com>
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by "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>
- 12) Re: RS-6 schematics  
by Dick Dillman <ddillman@igc.apc.org>
- 13) Re: B&W SSB Adapter  
by "Steve" <scb@mail.internettport.net>
- 14) Re: HQ-129X osc.  
by Ralph Parker <rparker@istar.ca>
- 15) Re: HQ-129X  
by ke8rn@juno.com
- 16) FS RT-671/PRC-47  
by "James D. Mayfield" <kb9bnr@revealed.net>
- 17) SB-220 Wanted  
by Sandy Gerli <angerli@connix.com>
- 18) Big capacitors  
by BOB RAGAIN <RAGAIN@hubvx6.sedalia.wireline.slbb.com>
- 19) The Last Coulomb

- by ail0@lehigh.edu (ARTHUR I. LARKY)
- 20) Re: Big capacitors...  
by Ed Sieb <esieb@gmsiworld.com>
- 21) Bristol wrenchs available  
by dma@islandnet.com
- 22) Re: Big capacitors  
by Michael Hanz <AAFRadio@erols.com>
- 23) Re: National web page??  
by nielw@ix.netcom.com
- 24) WTB Original Manual for S-29  
by Lenox Carruth <carruth@swbell.net>

-----  
From: Henry van Cleef <vancleef@netcom.com>  
Message-Id: <199806100405.VAA28547@netcom19.netcom.com>  
Subject: Re: HQ-129X  
To: Old Tube Radios <boatanchors@theporch.com>  
Date: Tue, 9 Jun 1998 22:05:25 -0600 (MDT)  
Cc: boatanchors@theporch.com  
MIME-Version: 1.0  
Content-Type: text/plain; charset=US-ASCII  
Content-Transfer-Encoding: 7bit

As Rhett T. George discourses

>  
>  
> I have noticed on the 10 mc upwards band that WWV comes in at 10.0  
> and at 10.9 mc (MHz for you younger fellows). Please, oh Hammarlund-  
> knowledgeable seer in BA land, tell me on which bands the LO should  
> be above the station frequency and on which, if any, it should be  
> below. The beautiful tuning cap is way too symmetrical to give me  
> a clue. Thanks.  
>

I didn't get a chance to respond to this earlier, but I dug out the HQ-129X schematic and looked at it. The local oscillator coils are all padded on all bands, which signifies "high oscillator" (i.e., oscillator frequency is IF frequency ABOVE the signal frequency) on all bands. In this case, the image frequency is ABOVE the signal frequency (WWV 10Mhz. is received at 10.0 and 10.91 Mhz with 455 Khz. IF). Simple: Hi oscillator = hi image on the receiver. If varying the signal generator, the image will come in below, that is, a generator signal of 9.09 Mhz will be received on the receiver 10 Mhz. dial setting as well as 10.0 on the generator.

Note that most HF receivers use hi oscillator, and the literature is usually (but not always) marked if lo oscillator is used. Also, lo oscillator is generally on the higher frequency bands. Clues are  
A. Oscillator variable cap is smaller than the RF tuning cap (very

common practice on AA5)

B. Oscillator coils have padder caps in series with them.

For lo oscillator, generally the RF coils are padded for the bands affected. The reason for reducing the max/min capacitance ratio (small cap, padders) is that the oscillator max/min frequency ratio is slightly less than the dial and RF tuning ratio. On a six band set, the RF ratio is generally around 2:1 or slightly more.

Generally, if you can receive the image easily, using a VFO-type signal generator, you need to reduce the generator output, particularly on frequencies below around 15-18 Mhz. Also note that the dial calibration on almost all VFO-type signal generators is not good enough to really give you a good alignment if you change the frequency. This is true even of the fancy generators like URM 25 and Measurements 65---I really got my fingers slapped as a new engineer for believing dial calibrations on a good generator.

The best tool to use is a crystal oscillator such as a Millen secondary frequency standard or a Measurements 111-series, although any stable 100 Khz/1Mhz oscillator will do. Bliley sold a 2-mode Xtal that uses a pair of tank circuits to select the frequency, and these were popular in the "better" of the home entertainment generators, such as the Hickock 191X. In these, you can select either one of the crystal modes or the VFO, not both (notwithstanding the blatant falsity on the front panel that says it is "crystal controlled."). In theory, you can use a stable LC oscillator at fixed frequencies, but these tend not to be as rich in harmonics as a crystal. The Bliley setup, and the Millen and Measurements units are usable well up into the harmonic series (10 and 6 meters on the 1 Mhz setting), while trying to use a VFO beyond about the 3rd or 4th harmonic can be difficult. In any case, you want to set a very accurate single frequency and use the harmonics to find points on the dial.

As an example, band 5 of the RME-45 tunes 9.5-19 Mhz. (about 2.1:1) at the very ends. Turn all the equipment on and let it warm up for half an hour. Tune in WWV at 10 Mhz., then introduce the 1Mhz. Xtal osc. signal in parallel at the antenna. Tune the Xtal padder for zero beat. Use loose coupling to preven oscillator pulling (not much of a factor in this adjustment, but an important practice to learn to adhere to for ALL beat note adjustments). Pick points about 20% up the dial from the low end and 80% up (on the RME, 11 and 17 Mhz. are good points) and walk up and down with the tuning knob, checking that you get reception every 1 Mhz. Use the padder or oscillator inductance adjustment (assuming that one of these is adjustable) to set the low side (11 Mhz.) on oscillator and RF coils, then use the trimmers at 17 Mhz. Then walk back and retweak, and repeat, walking back and forth between these two points while watching the amount of

error at the intermediate points. Note that on most receivers, the mixer RF adjustment will interact with the oscillator adjustment. A little dial rocking and retweaking will get rid of most of this effect---DON'T try to compensate for a bad-tracking oscillator by using this interaction. In a padded circuit, if the oscillator range is too wide or too narrow (i.e., you have to tweak the trimmer one way at the low end and the other way at the other end), you probably have padder cap problems (my RME coil boxes came out to replace a shorted padder cap). A clear indication of trouble in the coil boxes is a set where all but one or two bands will align beautifully, but the offending bands need the tweaks set to minimum in the padded stage to even get close to where the calibration is supposed to be (leaky/shorted padder). Note that dial mechanical position is part of the calibration---generally needs to be "equal overrun" at the end of the dial and set exactly on a high band with no LF-end tweak.

F. Langford Smith, in Radiotron Designer's Handbook 3rd and 4th editions, has an excellent treatise on design considerations for receiver tracking. While it doesn't tell you how to tweak up someone else's design---it is written for the design engineer who wants to select coil-cap parameters---it is a good discussion of the whole subject, and will give you some insight as to what to expect.

For ham radio work, where the main regions of interest are the ham bands, you can tailor the tuning for best performance on the ham bands, and let the outside regions be poorer. Langford Smith makes clear that you are going to have slight errors at some points on the dial---you can choose where these are going to be. Having the tweaks set for maximum sensitivity where you want to do serious listening can make a dramatic difference in your perception of the set performance.

The Hammarlund HQ's (unlike the RME-45) and most of the Hallicrafters and National sets have a smaller tuning cap in parallel with the main cap for "bandspread" tuning. You want to be careful to set and keep this cap in a fixed position, and may need to move the dial a bit to get best tracking on the main frequency dial. Generally the only "adjustment" you have on the "bandspread" cap is to bend the end cap rotor blades, and if they aren't segmented. Use this type of tweak judiciously, if at all. Remember that capacitance decreases as 1/the square of the distance between the plates, so if you have to open up the spacing very much, it won't have much effect. Also keep this in mind with compression trimmers---initial setting is generally about one turn loose from "tight" on these, which generally is about midrange.

A good grid dip such as a Measurements Megacycle Meter or one of the Millen grid dips can come in very handy here, particularly when chasing down oscillator pulling from the mixer RF. Procedure here is

to set the mixer RF and oscillator tweaks with the grid dip with receiver power off, then do a minor touch-up with the power on. Of course, it is mandatory to calibrate the grid dip with your Xtal oscillator (the Measurements and Millen standards have detectors in them for hearing the whistles).

If you really want to do serious work, you can break out your trusty Boonton Q meter or RX bridge, and use them. However, watch out. I personally think that Q meters are a bit tricky to use accurately, and you have to take the coils out of the radio to measure them with a Q meter. In design and manufacturing work, the engineer generally had a good feel from experience for the "Jones factor" needed to correlate Q meter measurements with receiver performance. The RX bridge, being a bridge, can generally be balanced which clip leads attached, and these can be connected directly to the circuit under test while it is wired up in the radio.

Some folks like to use frequency counters to set local oscillators. If the frequency counter is well-calibrated and stable, well, yeah, maybe OK, but it is a big and complex piece of equipment to use and a lot further away from WWV than a crystal oscillator. While it takes a bit of skill to do whistle-stop alignment, the method uses simple devices, is readily referenced to WWV (your NIST-traceability from the sky), and you're hearing through the receiver audio just what your tweak-up is able to do. A VTVM on the detector output will tell you in numbers just what you are getting for sensitivity.

Make sure that a hi oscillator really is hi at both ends of the band, and that you've got 10.0 mhz. of tuning range between points that are supposed to be 10.0 mhz. apart, and check everything against WWV every few hours, and you'll get just the alignment you want every time with the simple stuff.

turn the receiver o

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=====  
Hank van Cleef  
=====

-----  
Date: Wed, 10 Jun 1998 10:40:15 -0700  
From: Cris Calhoun <cris.calhoun@internetmci.com>  
Subject: Unknown Collins Transceiver  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-id: <357EC4FF.C6CBEE51@internetmci.com>  
MIME-version: 1.0  
Content-type: text/plain; charset=us-ascii  
Content-transfer-encoding: 7bit

Dear Boat Anchorites,

I need some help identifying an unknown Collins transceiver I found at a local electronics surplus store.

It appears to be a military unit, in a grey, enclosed, self-contained unit about 18 inches long, 8 inches wide and 5 inches high, with cooling fins on each end. The enclosure has a top held on by four latches. There are two pin-type connectors and a toggle switch on the right hand of one side, and two coaxial cable connectors on the left of the same side. On that same side is a small label which reads:

```
"Transceiver      Collins [logo]
Type 718V-1A    Ser. No T 628
Wt. 25.2 lb    PN758-5153-002
COLLINS RADIO COMPANY
TORONTO, ONTARIO  CANADA"
```

The inside has a row of pc-like cards, marked "TCXO-Multiplier", "Mixer-Variable Divider", "Modulator and VCO", "Audio/Squelch", "Receiver" and "Injection Oscillator". There is also a power supply with a little bank of fuses and connectors for selecting power supply settings, and an inverter and regulator.

On the top of one end, next to the cooling fin, is painted "Power Amplifier 796-7403-002".

Folks, what do I have, and what can I do with it, other than marvel at the impressive design?

Best, Cris Calhoun N6MAW

-----  
From: Pentti.Haka@Mikrolog.Fi (Pentti Haka)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RS-6 schematics  
Date: Wed, 10 Jun 1998 08:02:59 GMT  
Message-ID: <35823d2f.147851421@mail.mikrolog.fi>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: quoted-printable

Hi all,

I just got an RS-6 "spy radio" set from Larry Ware (thanks Larry!!!). Does anybody know where to get schematics and possibly other documentation for this nice little rig? I'll pay all costs of course.

73, Pentti

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=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D  
Pentti Haka  
OH2TC  
Pentti.Haka@Mikrolog.Fi  
=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D
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Message-Id: <3.0.1.32.19980610110042.006ae780@192.168.0.1>  
Date: Wed, 10 Jun 1998 11:00:42 +0200  
To: Old Tube Radios <boatanchors@theporch.com>  
From: "JOSE V.GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>  
Subject: WTB: Drake C-line  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hello!

As title says, I'm looking for a Drake C-line, not for me but for a very good friend of mine, also from Spain. He has not Internet access yet. Please, e-mail offers with description, including condition, serial numbers, options (if any, as filters) and any other info you think is useful. I'll manage all the paperwork (I'm becoming an specialist ;-)) ; don't worry about that.

By the way, my friend visited my shack and saw my C-line. He liked it so much that now he needs one :-)!.

Thanks and best regards.

JOSE

73 EB5AGV / EC5AAU  
JOSE V. GAVILA  
Ausias March 46, 15  
46910 Benetusser - VALENCIA  
SPAIN

\*\* VISIT MY VINTAGE RADIO SITE - updated 7-Jun-1998 \*\*\*  
<http://www.geocities.com/SiliconValley/6992/>  
 e-mail: eb5agv@ctv.es & eb5agv@amsat.org

Message-Id: <98Jun10.085158cdt.26894@firewall.sigg.com>  
Date: Wed, 10 Jun 1998 08:57:16 -0500

From: Bob Reynolds <breynold@sigg.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: 6146 types  
Mime-Version: 1.0  
Content-Type: text/plain  
Content-Disposition: inline

Can any one tell me the difference between the 6146, 6146A, and 6146B tubes. I have all 3 types and need to replace some soft ones. I beleive Heath used the "A" version, at least until the Apache came out. I have a matched set of the "B" I was going to put in an HW-101, but wonder if the others would work also (same brand, not matched).

thanks and 73, Red K5VOL  
breynold@sigg.com

-----  
From: tenagle@mmm.com  
Message-ID: <357E9C80.B7152D07@mmm.com>  
Date: Wed, 10 Jun 1998 09:47:28 -0500  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: RS-6 schematics  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Hi Pentti,

Congradulations! I'm sure you will enjoy it. You will need a good supply of crystals. Ive been buying out of band crystals and grinding them to within band. Others have attached a VFO.

Here is a URL with the schematics on it:  
<http://www.bluesky.com/warren/radios/spyradios.html>

If they are too small to read, let me know and I will xerox the schematics I have and mail them to you.

Good Luck,  
Tim Nagle, KB0QQM  
(Having married a Harkonen, I'm a "galvanized Finn")  
(612) 881-4648 (eve)  
(612) 736-5886 (day)

Pentti Haka wrote:

>



> Hi all,  
>  
> I just got an RS-6 "spy radio" set from Larry Ware (thanks Larry!!!).  
> Does anybody know where to get schematics and possibly other  
> documentation for this nice little rig? I'll pay all costs of course.  
>  
> 73, Pentti  
>  
> =====  
> Pentti Haka  
> OH2TC  
> Pentti.Haka@Mikrolog.Fi  
> =====

-----  
Message-ID: <00b201bd9481\$ad7d3d40\$949ed8cc@km3g.cts.com>  
From: "Lane C. Zeitler" <km3g@cts.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: National web page??  
Date: Wed, 10 Jun 1998 08:08:50 -0700  
MIME-Version: 1.0  
Content-Type: multipart/alternative;  
    boundary="-----\_NextPart\_000\_00AF\_01BD9447.003B0A20"

This is a multi-part message in MIME format.

-----\_NextPart\_000\_00AF\_01BD9447.003B0A20  
Content-Type: text/plain;  
    charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

Gentlemen,  
I am looking for a National virtual museum/web page, specifically in =  
regards to the NC-173. Also wonder if the same can be found for RME??

Lane  
KM3G  
San Diego

-----\_NextPart\_000\_00AF\_01BD9447.003B0A20  
Content-Type: text/html;  
    charset="iso-8859-1"  
Content-Transfer-Encoding: quoted-printable

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<HEAD>

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http-equiv=3DContent-Type>
<META content=3D'"MSHTML 4.72.2106.6"' name=3DGENERATOR>
</HEAD>
<BODY bgColor=3D#ffffff>
<DIV><FONT size=3D2>Gentlemen,</FONT></DIV>
<DIV><FONT size=3D2>I am looking for a National virtual museum/web page, =
specifically in regards to the NC-173. Also wonder if the same can be =
found for=20
RME??</FONT></DIV>
<DIV><FONT size=3D2></FONT>&nbsp;</DIV>
<DIV><FONT size=3D2>Lane</FONT></DIV>
<DIV><FONT size=3D2>KM3G</FONT></DIV>
<DIV><FONT size=3D2>San Diego</FONT></DIV></BODY></HTML>
```

-----=\_NextPart\_000\_00AF\_01BD9447.003B0A20--

-----  
Message-ID: <01BD946A.CEA66EE0@dstephen.gmsiworld.com>  
From: Ed Sieb <esieb@gmsiworld.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: 6146 types  
Date: Wed, 10 Jun 1998 12:25:06 -0400  
MIME-Version: 1.0  
Content-Type: text/plain; charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

A Thumb-nail sketch of 6146 type beam power pentodes?

6146:           25 W max plate dissipation.  
6146A:    25W plate dissipation, but slight modifications to improve IM  
characteristics for  
SSB/ class AB1 service  
6146B           35W plate dissipation, improved screen, and grid structure.  
Basically, an upgraded  
                version of a 6146A.

There are some situations where using a 6146B for simple Class-C service, or AM,  
is not  
recommended. Not quite sure why, though.

73, de Ed   VA3ES/VE2BAQ                   (that's Boat Anchor Quality)

~~~~~  
Ed Sieb, VA3ES                   esieb@gmsiworld.com  
P. O. Box 8377, Ottawa Terminal, Ottawa, Ontario, K1G 3H8  
613-738-8924 (H)       613-599-5161 (W)

AMI #529 Canadian Division Director.  
Member - Radio Club of America, QCWA, AWA  
Net Manager - Canadian Boat Anchor Net (3745 Kcs)

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-----  
Message-ID: <01BD946B.674616A0@dstephen.gmsiworld.com>  
From: Ed Sieb <esieb@gmsiworld.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: RE: 6146 types  
Date: Wed, 10 Jun 1998 12:29:23 -0400  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Oh... and one more thing...  
I use 6146W's in my Apache.  
6146W are just JAN/military versions of 6146B's.  
Seem to just fine.

Ed

-----  
Message-Id: <199806101638.MAA16163@kanga.INS.CWRU.Edu>  
Date: Wed, 10 Jun 1998 12:38:06 -0400 (EDT)  
From: gcr2@po.CWRU.Edu (George C. Rybicki)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Whatza 4D22 used in.

A while back a bought a Viking 1 and the seller gave me a couple of 4D22's which he described as a 24 v 4D32. Well 4D32's are a dime a dozen now and 4D22's are "\$\$\$Call for Price\$\$\$". I wonder why they are in such high demand and what were they used in. I guess they could just be rare. Anyhow I am going to swap them off to a tube dealer unless I find someone on the list who needs them enough to make a fair offer. Thanks George

-----  
Message-ID: <21B46CBD022AD1118F0500805F15A06884A053@STPMSX05.stp.guidant.com>  
From: "Freeberg, Scott (STP)" <scott.freeberg@guidant.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: WTB: Peanut Whistle Transmitter/Receiver  
Date: Wed, 10 Jun 1998 11:49:32 -0500  
MIME-Version: 1.0  
Content-Type: text/plain

I am looking for a few peanut whistle transmitters and receivers from the 50's and 60's. Can you please take a look in your junk box and see if these little buggers are there? All of the transmitters are on a

chassis only, no cabinets, and only 2 or 3 tubes. Built or kits fine.  
If you have one, I would sure love the chance to put it on the air.

Micamold XTR-1 Transmitter  
World Radio Laboratories WRL Novice CW-7 Transmitter  
Walter Ashe WAT-25 Novice Transmitter  
Walter Ashe WAP-25 Novice Power Supply  
Walter Ashe WAR-25 Novice Receiver  
Meissner Model 2-CW Novice Transmitter

Burnstein Applebee "BA 4 Band Worldwide Receiver", a couple tube regen  
in leatherette case w/BA logo  
Lafayette KT135 "Explor-air" Receiver, a couple tube regen in a  
leatherette case

Thanks. 73,

Scott WA9WFA Saint Paul Minn

-----  
Date: Wed, 10 Jun 1998 10:27:57 -0700 (PDT)  
Message-Id: <2.2.16.19980610102446.3a6f7b22@pop.igc.org>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Dick Dillman <ddillman@igc.apc.org>  
Subject: Re: RS-6 schematics

At 08:02 AM 6/10/98 GMT, Pentti Haka wrote:

>I just got an RS-6 "spy radio" set from Larry Ware (thanks Larry!!!).  
>Does anybody know where to get schematics and possibly other  
>documentation for this nice little rig? I'll pay all costs of course.

Greetingd and good luck, Pentti!

I too have been looking for a RS-6 set If you or any other list member  
knows where one may be found please let me know.

73,

Dick

Dick Dillman  
<ddillman@igc.apc.org>  
WPE2VT W6AWO  
Collector Of Heavy Metal:

Harleys, Willys and Radios Over 100lbs.

-----  
Message-Id: <199806101816.NAA10874@loki.internettport.net>  
From: "Steve" <scb@mail.internettport.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Date: Wed, 10 Jun 1998 12:55:49 +0000  
MIME-Version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT  
Subject: Re: B&W SSB Adapter  
CC: boatanchors@theporch.com

Hi There;

You wrote:" I guess the next step is attempt to interface to an HQ-120, or another Manassas project, a badly hacked up BC-348."

BC-224/348 has 915kc I.F., don't know if that will work. Am finishing up a 'uniquely' demilled BC that was nearly pristine on top and a genuine rats nest underneath. Seems to do fine on SSB as is, but be sure to replace the 68k plate resistor and its bypass cap in the BFO can for reliable proper operation. This is the only concealed paper cap in the Belmont BCs, the ones in the coil gallerys are the highly reliable mica type (don't know about the budget "Q" model tho'). The cable pulls from panel, don't bother trying to disconnect from can. While you have the can open, take the opportunity to recenter the stator plates on the varicap and lube the shaft lightly w/your fave slick stuff.

BTW, this is one of those sets that can have the I.F. alignment done by ear to band noise thru the crystal filter as well or better than most instrument alignments will achieve (except sweep, which provides diagnostic of possible probs during the procedure,Thnx to Arden Allen). Just be sure to neutralize the xtal filter varicap on noise first (dead center of min HF content), then peak I.F.s for max sensitivity on band noise. Repeating the neutralization and peaking once more should yield about all of its capability. Then simply align & peak front end to landmarks or a sig gen. Then head to 3885 kc so it can play with its peers (:-]} .

Regards; Steve bringhurst

-----  
Message-Id: <3.0.5.16.19980610110812.08c753b4@istar.ca>

Date: Wed, 10 Jun 1998 11:08:12 -0700  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Ralph Parker <rparker@istar.ca>  
Subject: Re: HQ-129X osc.  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Bill Hawkins wrote:

>It's been my limited experience that it's the other way around.  
(The osc. is above the RF except on the highest band)

and of course he's right. I knew that, I meant that, yet my fingers  
switched the data on the way to the keyboard. Severe apologies to all  
concerned, especially Rhett, KE4HIH. I hope I didn't spoil your day.  
See also CQ for May 1959, page 39.  
Next time I'll let the smart guys solve the problems

Embarrassingly yours,  
Ralph, VE7XF

-----  
From: ke8rn@juno.com  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: boatanchors@theporch.com, w8vrj1@juno.com, wa8mlv@jun.com  
Date: Wed, 10 Jun 1998 14:00:08 -0400  
Subject: Re: HQ-129X  
Message-ID: <19980610.140618.3302.4.KE8RN@juno.com>

Hello all,

There is a confusing point in the description of the image frequencies  
for the HQ-129X [and similar receivers]. Excuse the BW, but I don't want  
anyone sent in the wrong direction. I put a few notes in CAPS in the  
body of this message; I hope it is clear and useful. 73.

George KE8RN

On Tue, 9 Jun 1998 22:05:25 -0600 (MDT) Henry van Cleef  
<vancleef@netcom.com> writes:

>As Rhett T. George discourses

>>

>>

>> I have noticed on the 10 mc upwards band that WWV comes in at 10.0

>> and at 10.9 mc (MHz for you younger fellows). Please, oh

>Hammarlund-

>> knowledgeable seer in BA land, tell me on which bands the LO should

>> be above the station frequency and on which, if any, it should be

>> below. The beautiful tuning cap is way too symmetrical to give me

>> a clue. Thanks.

>>

>I didn't get a chance to respond to this earlier, but I dug out the  
>HQ-129X schematic and looked at it. The local oscillator coils are  
>all padded on all bands, which signifies "high oscillator" (i.e.,  
>oscillator frequency is IF frequency ABOVE the signal frequency) on  
>all bands. THIS IS GENERALLY CORRECT; I AM NOT CERTAIN ON THE SPECIFICS  
OF THE HQ-129X.

In this case, the image frequency is ABOVE the signal  
>frequency (WWV 10Mhz. is received at 10.0 and 10.91 Mhz with 455 Khz.  
>IF). THIS IS NOT SO CORRECT; WHEN THE RECEIVER IS SET TO RECEIVE  
10.000 MHz, THE LOCAL OSCILLATOR IS AT 10.455 MHz, AND THE TWO SIGNALS  
THAT CAN BE RECEIVED ARE 10.000 AND 10.910 MHz. WWV COULD BE RECEIVED AT  
TWO POINTS, WITH THE DIAL SET TO 10.000 MHz OR WITH THE DIAL SET TO 9.190  
MHZ, NOT 10.910 MHz. THIS IS BECAUSE THE LOCAL OSCILLATOR MUST BE 455  
KHz [0.455 MHz] DIFFERENT IN FREQUENCY FROM THE RECEIVED SIGNAL; THE L.O.  
WILL BE AT 10.455 MHz [DIAL AT 10.000 MHZ] OR 9.545 MHz [DIAL AT 9.190  
MHZ, NOT 10.910 MHz]. WHEN THE RECEIVER DIAL IS SET TO 10.910 MHz, THE  
RECEIVED IMAGE IS AT 11.820 MHz, AND THE L.O. IS AT 11.365 MHz. WHEN THE  
L.O. IS ABOVE THE RECEIVE FREQUENCY, THE IMAGE IS ABOVE THE RECEIVED  
FREQUENCY BY DOUBLE THE I.F. FREQUENCY; HOWEVER, ANY GIVEN SIGNAL CAN BE  
RECEIVED AT A DIAL SETTING THAT IS BELOW THE ACTUAL STATION FREQUENCY BY  
DOUBLE THE I.F.

Simple: Hi oscillator = hi image on the receiver. If varying  
>the signal generator, the image will come in below, that is, a  
>generator signal of 9.09 Mhz will be received on the receiver 10 Mhz.  
>dial setting as well as 10.0 on the generator. NO, SINCE THE L.O.  
FREQUENCY IS 455 KHz ABOVE THE RECEIVE FREQUENCY, THE GENERATOR CAN BE  
HEARD AT 10.000 MHz AND AT 10.910 MHZ, AS THE L.O. FREQUENCY IS 10.455  
MHZ. OWING TO THE FRONT END SELETIVITY, THE IMAGE SHOULD NOT BE AS  
STRONG AS THE DESIRED FREQUENCY.

>

>

-----  
Message-Id: <3.0.32.19980610135117.006a026c@revealed.net>

Date: Wed, 10 Jun 1998 13:51:23 -0500

To: Old Tube Radios <boatanchors@theporch.com>

From: "James D. Mayfield" <kb9bnr@revealed.net>

Subject: FS RT-671/PRC-47

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Not sure if you would call it a BA or not, it weighs in at 156 pounds, it  
would hold my boat!

I have a Military RT-671/PRC-47 HF transceiver for sale. If you want the specs, please have a look at my sale page.

<http://home.revealed.net/qste/sale>

Also I came across a hole bunch of B&W and James Millen, band coils, the other day, also several Meissner "Signal Shifter Coil Kits" for various bands, after I figure out what I want to keep, I will post these on my web site for sale.

Coils R Us!

73 Dave

P.S. If you, like myself are interested in buying and selling nice clean old radios, please see my BA web Page at  
<http://home.revealed.net/qste/sale/index.html>

\*\*\*\*\*

J. Dave Mayfield KB9BNR

<http://home.revealed.net/qste/bnr/kb9bnr.html>  
[kb9bnr@revealed.net](mailto:kb9bnr@revealed.net)

-----  
Message-ID: <357D8B97.DAF9DC47@connix.com>  
Date: Tue, 09 Jun 1998 15:23:04 -0400  
From: Sandy Gerli <angerli@connix.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: SB-220 Wanted  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

WANTED: SB-220 in good condx. with manual. C'mon...there's gotta be one hiding out there in BA-Land somewhere!

73,

--  
Sandy Gerli, AC1Y  
500 Country Club Road  
Avon, CT 06001-2406  
(860) 675-5566  
E-Mail: [angerli@connix.com](mailto:angerli@connix.com)

Life Member: ARRL, QCWA



Charter Member: Collins Collectors Association

"It is better to remain silent and be thought a fool,  
Than to speak up and remove all doubt..." - Mark Twain

-----  
Date: Wed, 10 Jun 1998 14:50:27 -0600 (MDT)  
From: BOB RAGAIN <RAGAIN@hubvx6.sedalia.wireline.slb.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: RAGAIN@hubvx6.sedalia.wireline.slb.com  
Message-Id: <980610145027.28c0334e@hubvx6.sedalia.wireline.slb.com>  
Subject: Big capacitors

Hello fellow boatanchorites,

I'm about 20 behind and just now read the very interesting exchanges about the amount of capacitance required to hold 24 v for 1.5 sec, and the lack of availability of caps of that size, when a memory came back...boingggg.

When I was a kid, I read a book which sort of centered around a young ham who liked to build things. He shopped at a little electronics hole-in-the-wall store in the town where he lived.

One day he went in to buy a big filter capacitor, maybe a few hundred micro-farads at a kv, and the component he was handed was only a quarter inch in diameter and an inch long. He knew it wasn't physically large enough, but the proprietor told him to take it home and try it. Electrically it did the job! He continued to buy parts which were engineered well beyond the capabilities of that era, and the source eventually was found to be, well, non-terrestrial.

Has anyone ever read that book? I'd sure like to find it again!

Thanks,

Bob

-----  
Bob Ragain    WB4ETT    Littleton, CO

-----  
Message-Id: <199806102107.RAA72426@ns4-1.CC.Lehigh.EDU>  
Date: Wed, 10 Jun 1998 17:07:00 EDT  
From: ail0@lehigh.edu (ARTHUR I. LARKY)  
Subject: The Last Coulomb  
To: Old Tube Radios <boatanchors@theporch.com>

I guess it's time to throw in my last comment on coulombs.

Art

### The Last Coulomb

Dave wanted to know what size capacitor he needed to be able to draw 75 amps for 1.5 seconds at 24 volts. Let's look at the possibilities:

(1) A Sears DieHard battery can put out 860 amps of cranking current for 30 seconds; at the end of which its voltage has dropped from 12.6 to 7.2 volts. Assuming linearity (probably not true since the voltage may well drop faster towards the end, nevertheless) that's 0.18 volts per second or 0.24 volts in 1.5 seconds - or 1%. Dave wants 75 amps, not 860, so I doubt that the required two batteries in series will ever notice him.

(2) If he doesn't want to chance any voltage drop he can buy a 100 amp, 100 PIV diode, two 110 to 12 volt 75 amp transformers, and a dryer cable and make a half-wave rectifier. He can use that to charge the batteries and to provide the actual output energy. He doesn't need a capacitor because the batteries will do a pretty good job of holding the voltage steady.

(3) He can decide how much of a voltage drop he can tolerate over the 1.5 seconds. The formula for the decay of the voltage on a capacitor is:

$$e \text{ to the power } (-t/RC)$$

where e is the base of the natural system of logarithms.

The load resistance  $R = 24 \text{ volts} / 75 \text{ amps} = 0.32 \text{ ohms}$ .  $t = 1.5$  seconds  $t/R = 4.6875$  farads.

For small percentages of voltage drop, the exponential function is nearly linear, so we can make a table:

Percent drop	Required capacity	Voltage @ 1.5 seconds
=====	=====	=====
1 %	$4.69/.01 = 469 \text{ farads}$	23.76
2 %	$4.69/.02 = 235 \text{ f}$	23.52
5 %	$4.69/.049 = 95.7 \text{ f}$	22.80
10 %	$4.69/.095 = 49.4 \text{ f}$	21.60

The last two values take into account that the exponential is deviating from linearity. Note that the 1% drop of the DieHard batteries is 'equivalent' to 469 farads of capacity.

Conclusion: Buy two batteries and keep them on trickle charge.

Art  
K3HBA

-----  
Message-ID: <01BD9493.BA5555E0@dstephen.gmsiworld.com>  
From: Ed Sieb <esieb@gmsiworld.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Big capacitors...  
Date: Wed, 10 Jun 1998 17:18:02 -0400  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Hmmm.... sounds suspiciously like the same folk who sent an \_INTEROSSITER\_ to Earth :-)

-----  
From: dma@islandnet.com  
Message-Id: <Version.32.19980610134327.0104ecf0@mail.islandnet.com>  
Date: Wed, 10 Jun 1998 13:50:19 -0700  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Bristol wrenchs available  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hi folks ...

A few weeks back I posted to the Boatanchors list that I had a small supply of L shaped Bristol wrenchs that fit the R-390A knobs as well as most of the rf deck slugs (not all - I've found some slugs that need a smaller bristol wrench).

They all went almost immediately, but I've been able to get a few more. This will be a last chance offer for what I've got left.

These are a long sided wrench (3") which makes them a lot more useful than the smaller ones you normally run into. They are good quality.

\$3US each or two for \$5 air-mailed.

Jan Skirrow, VE7DJX

Duncan, BC, Canada

\*\*\*\*\*

<http://www.islandnet.com/~dma/Boatanchors/>

\*\*\*\*\*

-----  
Message-ID: <357FB7FF.6B85@erols.com>  
Date: Thu, 11 Jun 1998 06:57:03 -0400  
From: Michael Hanz <AAFRadio@erols.com>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: Old Tube Radios <boatanchors@theporch.com>  
Subject: Re: Big capacitors  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

BOB RAGAIN wrote:

> When I was a kid, I read a book which sort of centered around a young ham  
> who liked to build things. One day he went in to buy a big filter capacitor,  
maybe a few hundred  
> microfarads at a kv, and the component he was handed was only a quarter  
> inch in diameter and an inch long.  
> Has anyone ever read that book? I'd sure like to find it again!

Title was This Island Earth, author not remembered. They made a bad  
movie out of it, I believe. One of the best SF books I've ever read.

73,  
Mike

-----  
From: nielw@ix.netcom.com  
Message-ID: <357F12F5.64E6@ix.netcom.com>  
Date: Wed, 10 Jun 1998 18:12:53 -0500  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
CC: boatanchors@theporch.com  
Subject: Re: National web page??  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Lane,

I've a National web page (Radio Bay). Go to:

<http://www.io.com/~nielw/index.htm>

for the home page or:

[http://www.io.com/~nielw/nat\\_list/nc173.htm](http://www.io.com/~nielw/nat_list/nc173.htm)

for the page specific to the NC173.

73, Niel-WA5VLZ Rochester, MN

Lane C. Zeitler wrote:

>

> I am looking for a National virtual museum/web page, specifically in  
> regards to the NC-173.

-----  
Message-ID: <357F15EF.D1CAFD8F@swbell.net>  
Date: Wed, 10 Jun 1998 18:25:36 -0500  
From: Lenox Carruth <carruth@swbell.net>  
MIME-Version: 1.0  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: WTB Original Manual for S-29  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Greetings all,

I have just acquired a Hallicrafters S-29 and would like to find an  
original manual. Anyone got any ideas? Or manuals?

Thanks in advance.

--

Lenox

-----  
Lenox Carruth, Jr.                      carruth@swbell.net  
Dallas, Texas  
Collector of WW-II Communications Equipment and Memorabilia

Wanted: TCS-14 Transmitter, TBX, BD-71, Sextant  
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End of BOATANCHORS Digest 2087

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